

REMARKS

Claims 1-38 are now pending in the application. Minor grammatical amendments have been made to the specification and the claims have been amended to simply overcome the objections to the claims. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claim 12 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Applicants note that claim 12 has been amended as suggested by the Examiner. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102 AND § 103

Claims 1, 16, and 28 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Wheeler (U.S. Pat. No. 6,277,509). This rejection is respectfully traversed.

Claims 1-9, 12, 16-22, and 28-34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Borup et al. (U.S. Pat. No. 6,521,204). This rejection is respectfully traversed.

Claims 10, 23, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Borup et al. (U.S. Pat. No. 6,521,204) in view of Okamoto et al. (U.S. Pat. No. 6,582,841). This rejection is respectfully traversed.

Claims 11 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Borup et al. (U.S. Pat. No. 6,521,204) in view of Keskula et al. (U.S. Pat. No. 6,159,626). This rejection is respectfully traversed.

Claims 13, 15, 25, 27, 36, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Borup et al. (U.S. Pat. No. 6,521,204) in view of Okamoto et al. (U.S. Pat. No. 6,582,841). This rejection is respectfully traversed.

At the outset, Applicants note that claims 1 and 16 have each been amended to define the first heated exhaust stream of the first combustion heater system being “passed through said at least one of said reformer, said shift reactor, and said preferential oxidation reactor.” In addition, claim 16 has been amended to define the second heated exhaust stream of the second combustion heater system as being “passed through said at least another of said reformer, said shift reactor, and preferential oxidation reactor.” Similarly, claim 28 has been amended to define the first heated exhaust stream of the first combustion heater system as being “passed through said reformer” and defining the second heated exhaust stream of the second combustion heater system as being “passed through said shift reactor.” Contrary to this, Applicants submit that the system of Wheeler ‘509 fails to disclose a first combustion heater system operable to produce thermal energy as a product of the combustion of air and fuel in the form of a first heated exhaust stream that is passed through one of the reformer, shift reactor and preferential oxidation reactor, as claimed.

In particular, with regard to Wheeler '509, the Examiner asserts that the system includes a first combustion heater system and refers to the autothermal reformer 64 having a POX section and an SR section. Applicants respectfully submit that the autothermal reformer does not have a combustion heater system as asserted by the Examiner. In particular, the POX section of the autothermal reformer provides a catalytic reaction that is exothermic, but does not provide for "combustion" of the fuel, as required by the claims. The POX section functions catalytically as opposed to functioning through combustion. Therefore, Applicants submit that the system of Wheeler '509 does not disclose the invention as claimed and therefore, reconsideration and withdrawal of the rejections relying on Wheeler '509 are respectfully requested.

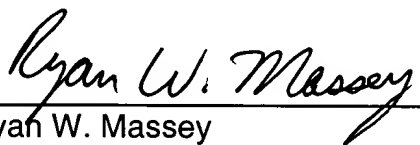
With regard to the rejections relying on Borup et al. '204, Applicants again note that the POX section of the autothermal reformer 40 does not include combustion of fuel, but instead is a catalytic reactor and therefore, would not satisfy the limitations of a combustion heater system. Furthermore, the combustor 16 as disclosed in Fig. 1 of Borup '204 is utilized solely for providing heat for heating water at heat exchanger 18 for providing steam which is provided to the autothermal reformer 40. The combustion gases from the combustor 16 do not pass through the autothermal reformer 40, gas shift reactor 50 or PROX 54. Instead, the exhaust gases from the combustor are passed through to ambient at the "exit" as illustrated in Fig. 1. Therefore, Applicants submit that the system of Borup et al '204 fails to disclose the invention as claimed. Therefore, reconsideration and withdrawal of all rejections relying on Borup et al. '204 are respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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